

Figure 1. Location map for model domain. The shaded region is the approximate location of the Carbonate-rock province. The hydrographic areas with the cross-hatch pattern are all of the basins where pumping was originally proposed by the Las Vegas Valley Water District. Spring Valley is in red.

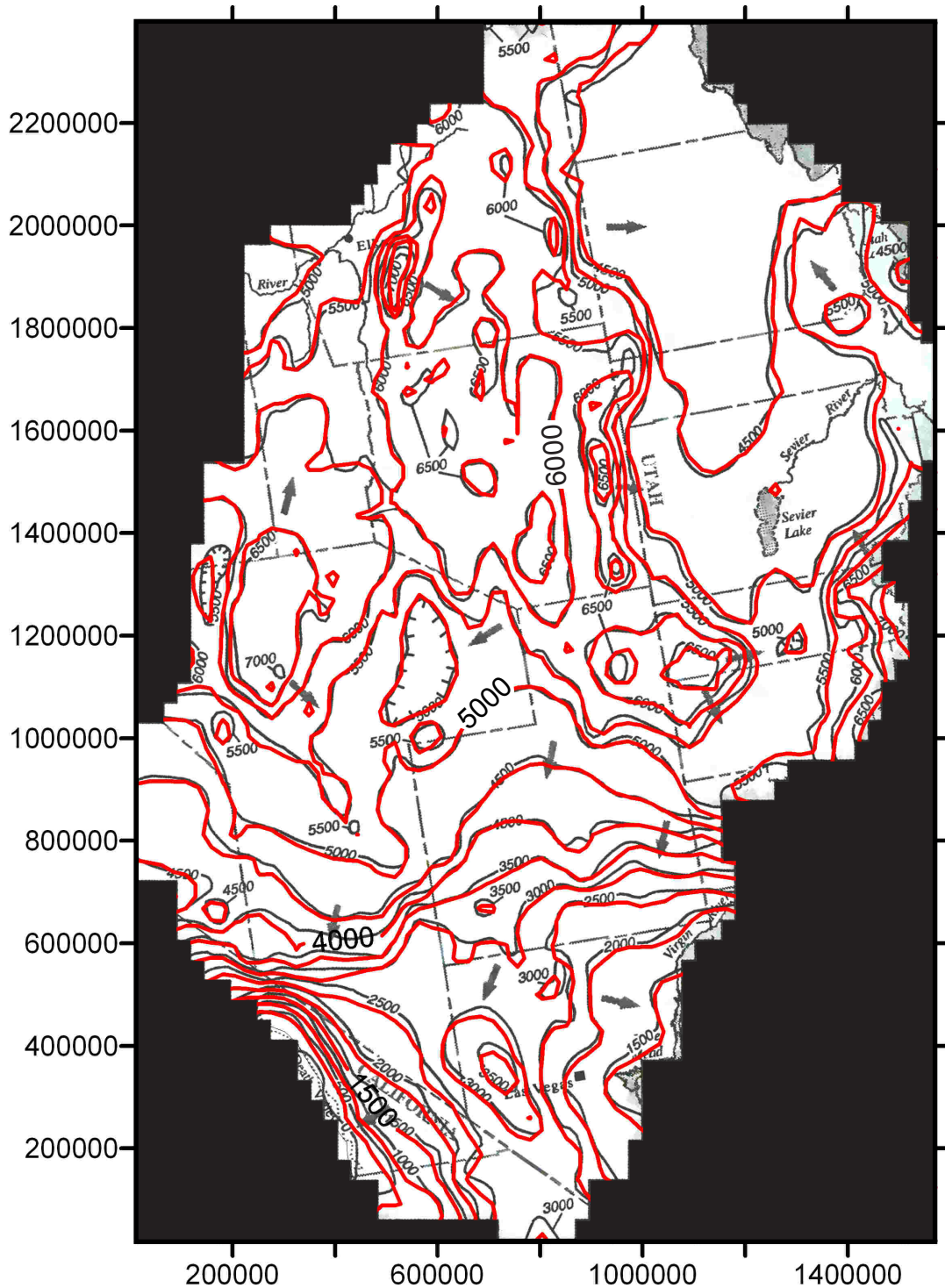


Figure 2. Comparison of contours of head from Schaefer and Harrill (1995, black lines) with those obtained by running the MODFLOW simulation with the data files as received by Dave Prudic without modification (red lines). Small differences are due to differences in the contouring software. Numbers on the X and Y axes are in feet. The model domain is 300 miles from west to east, 457.5 miles from south to north.

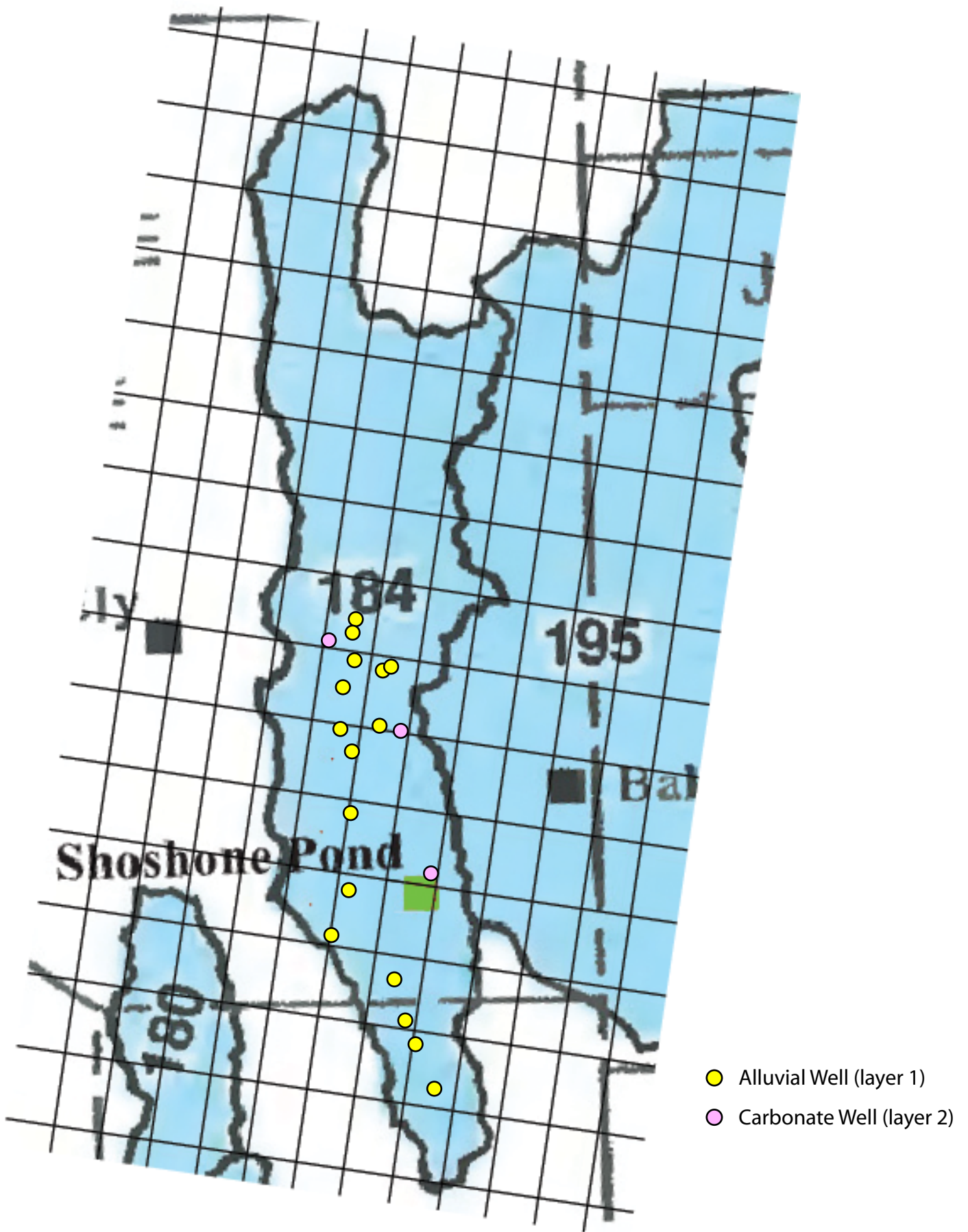


Figure 3. Proposed points of diversion in Spring Valley superimposed on the model grid. Pumping well locations are courtesy of the Southern Nevada Water Authority.

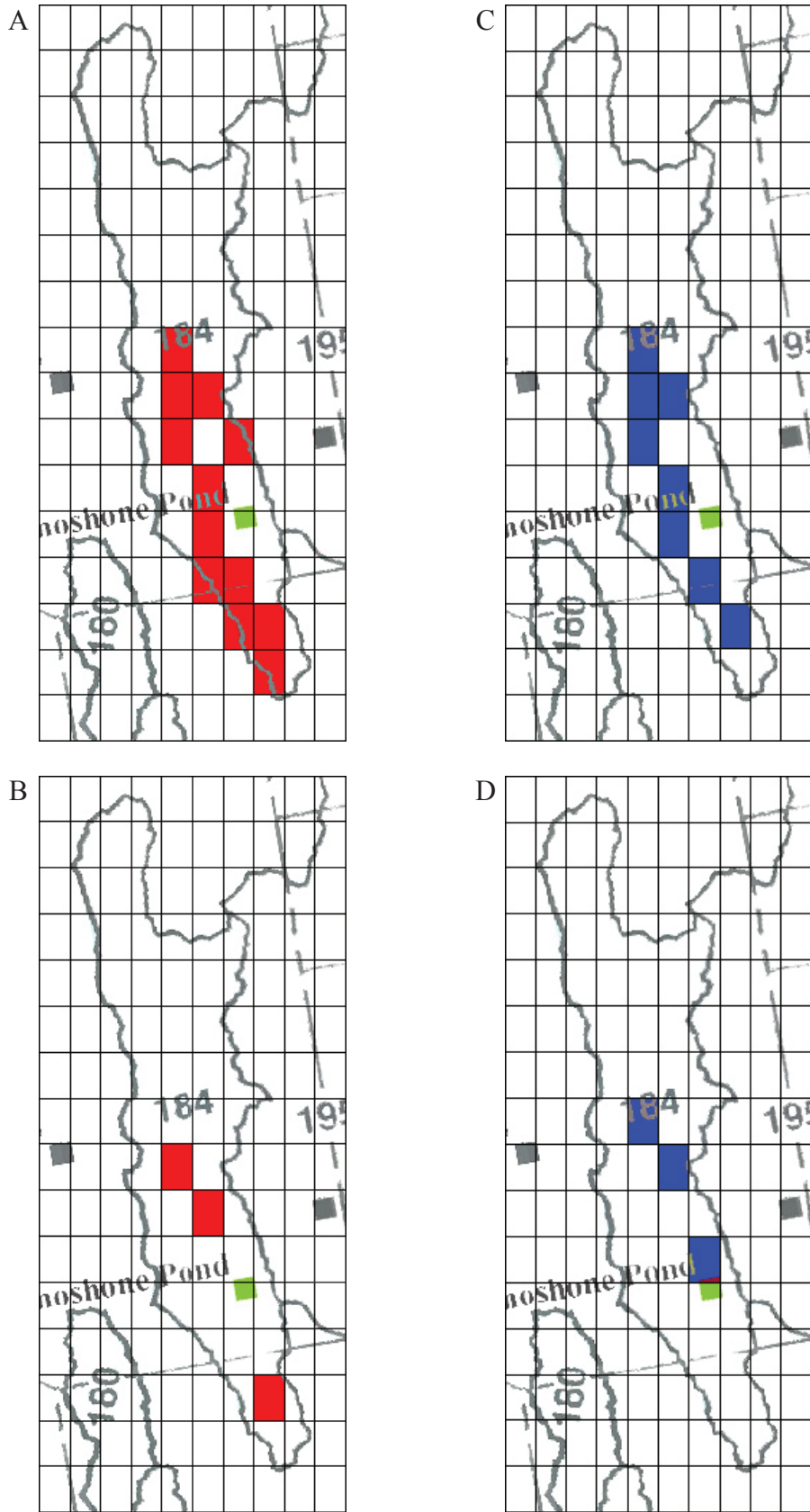


Figure 4. A portion of the MODFLOW grid showing the location of the Spring Valley Hydrographic Area. (A) and (B) show the original location of pumping wells in Spring Valley (in red) in layers 1 and 2, respectively. (C) and (D) show the modified pumping well locations (in blue) in layers 1 and 2, respectively.

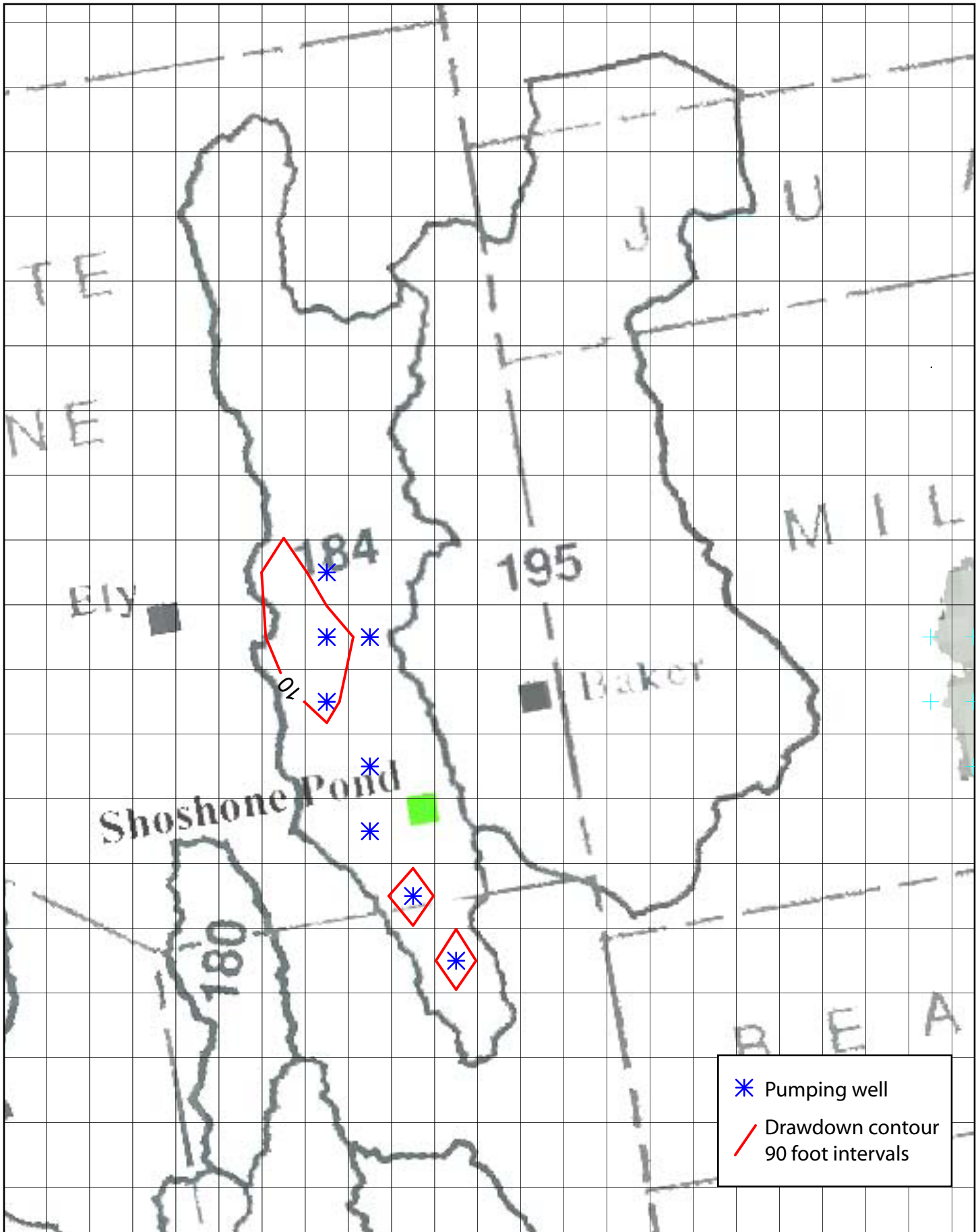


Figure 5A. Drawdown in the alluvial aquifer following 5 years of pumping. Contours are in feet.

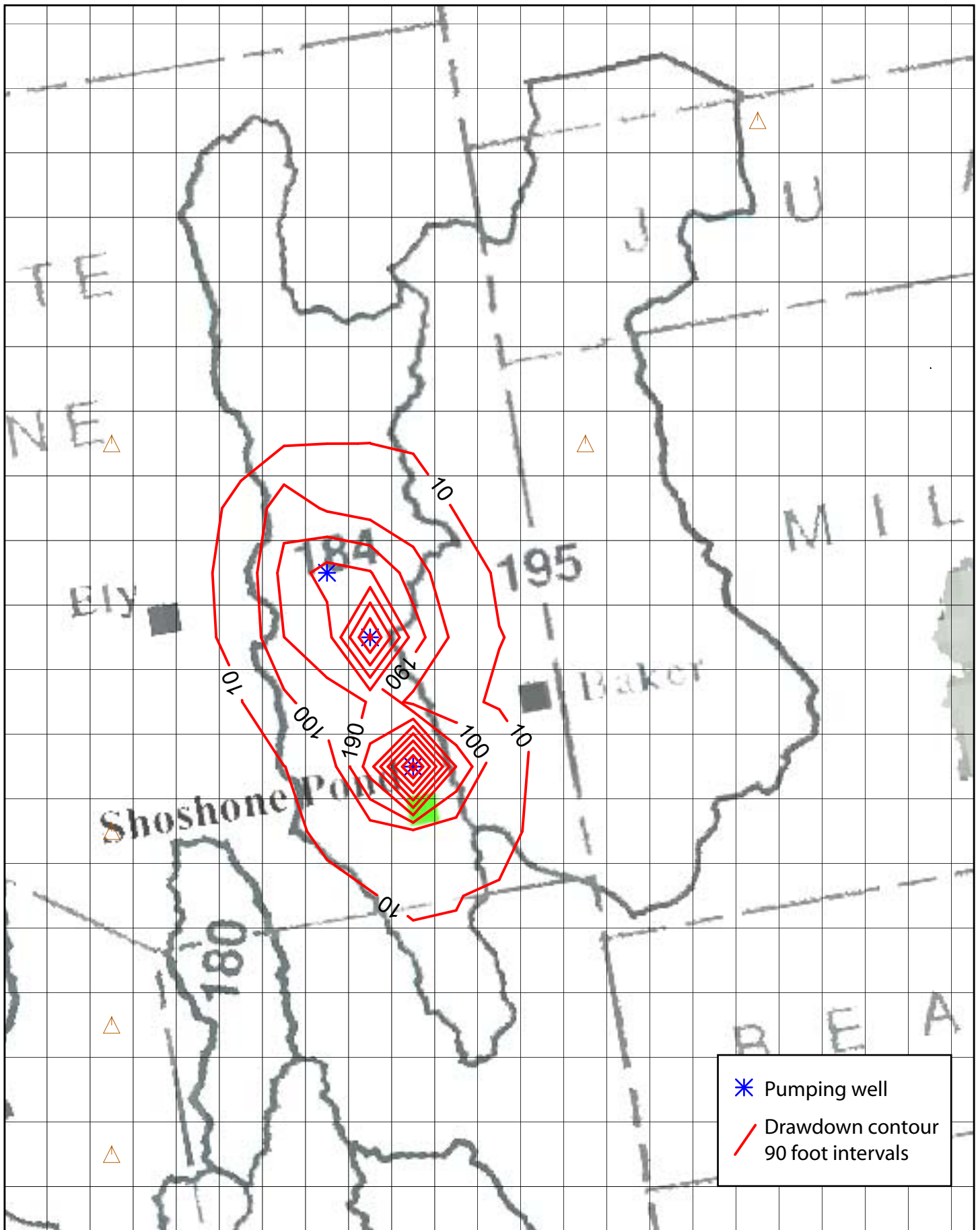


Figure 5B. Drawdown in the regional carbonate aquifer following 5 years of pumping.

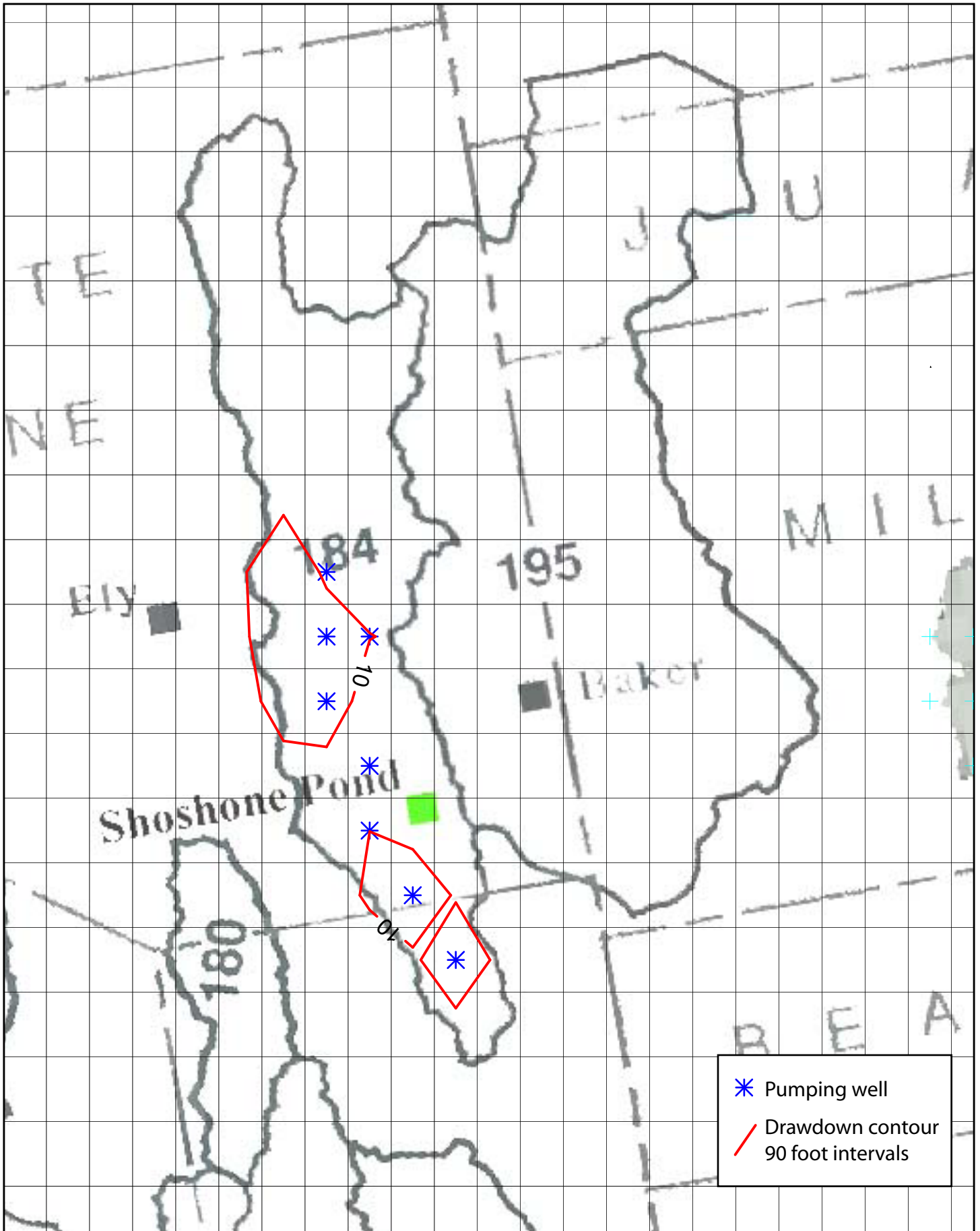


Figure 6A. Drawdown in the alluvial aquifer following 10 years of pumping.

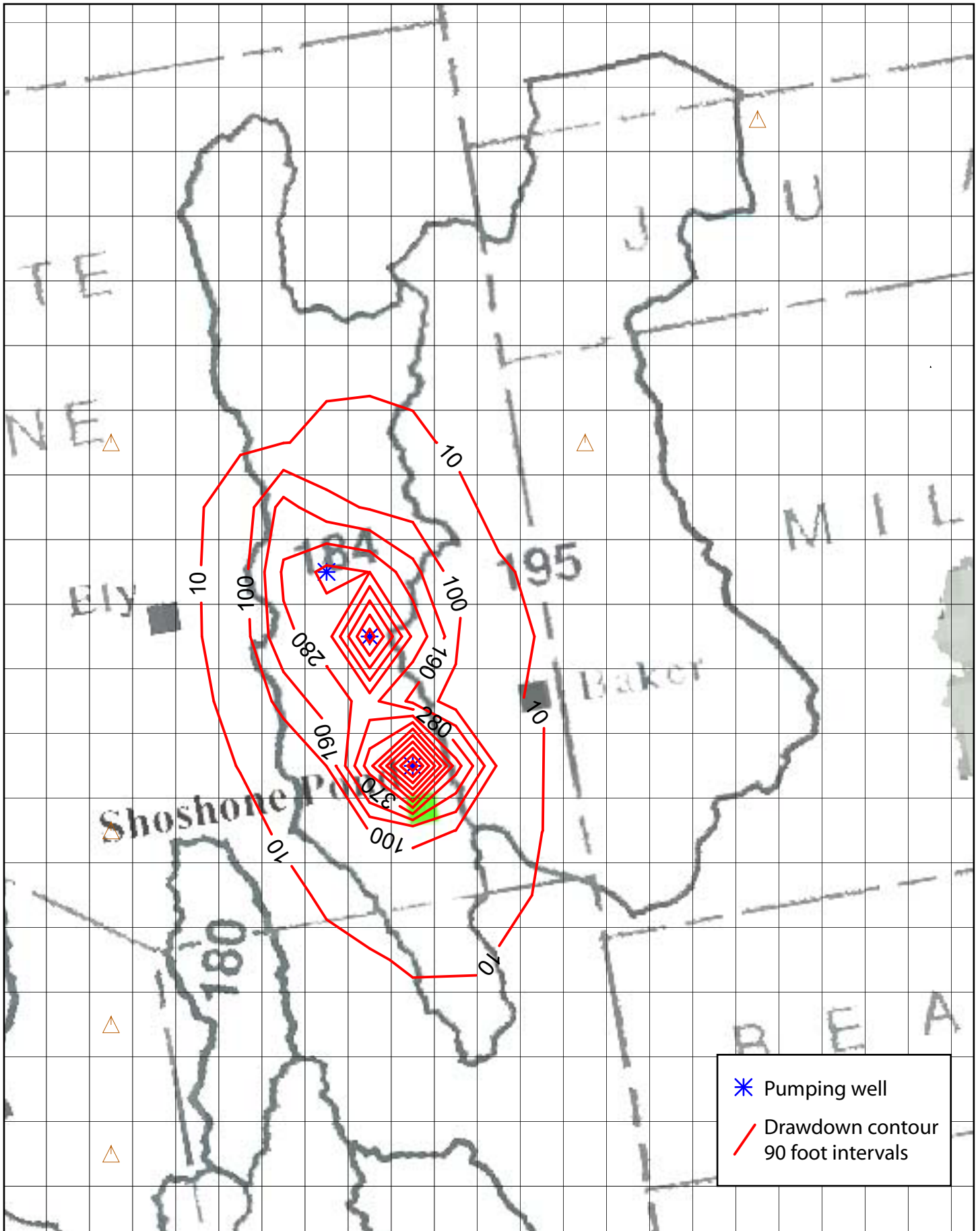


Figure 6B Drawdown in the regional carbonate aquifer following 10 years of pumping.



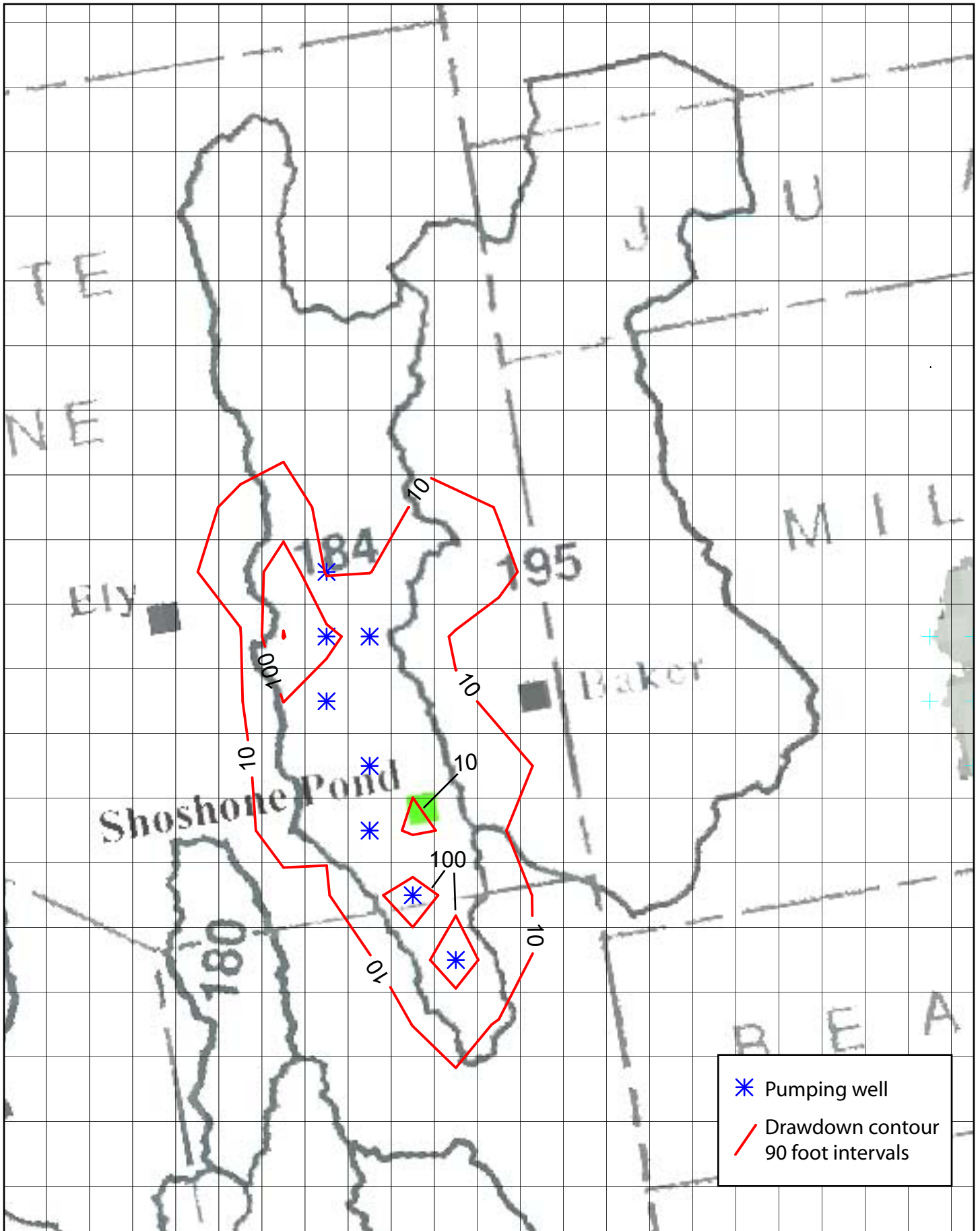


Figure 7A. Drawdown in the alluvial aquifer following 50 years of pumping.

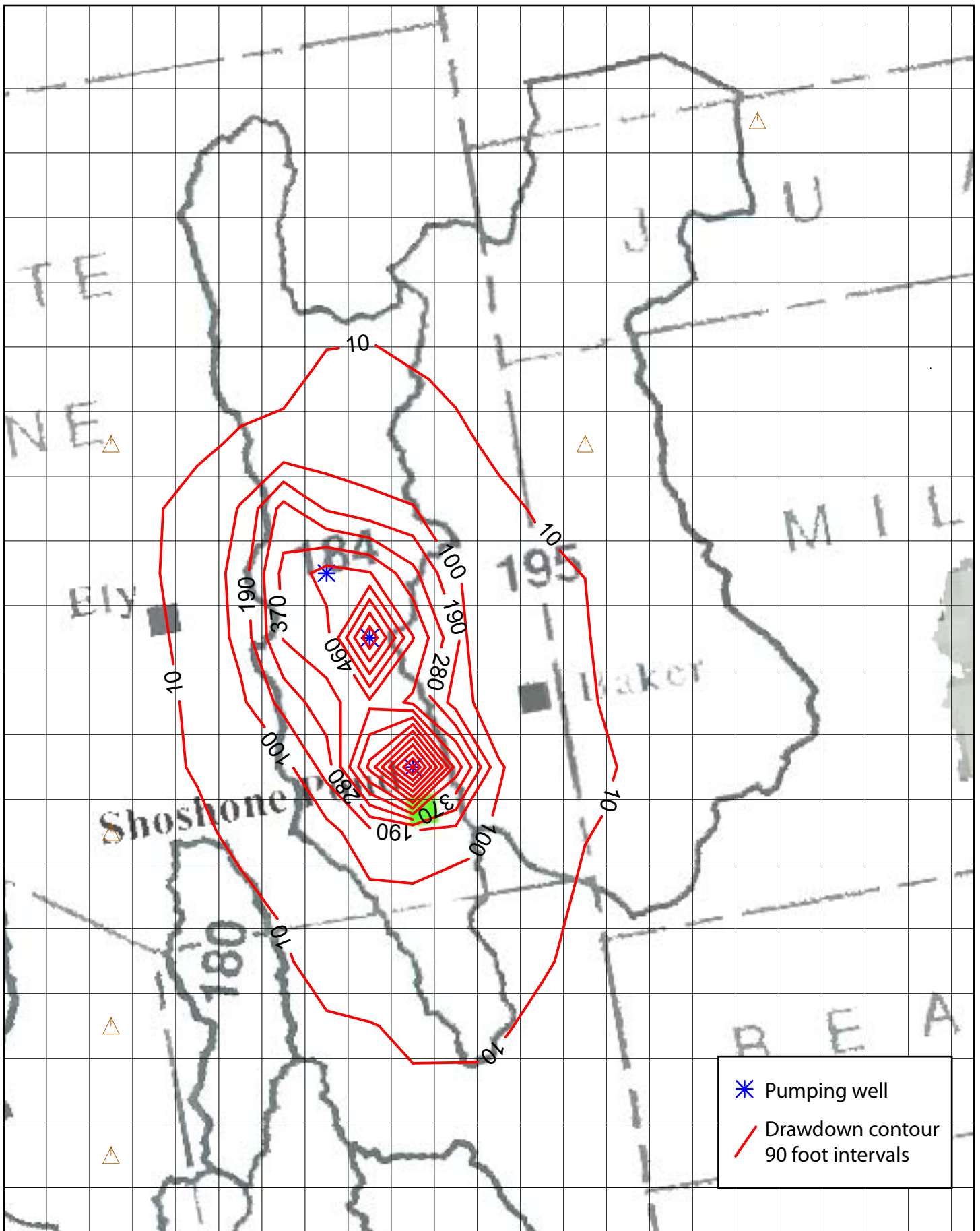


Figure 7B. Drawdown in the regional carbonate aquifer following 50 years of pumping.

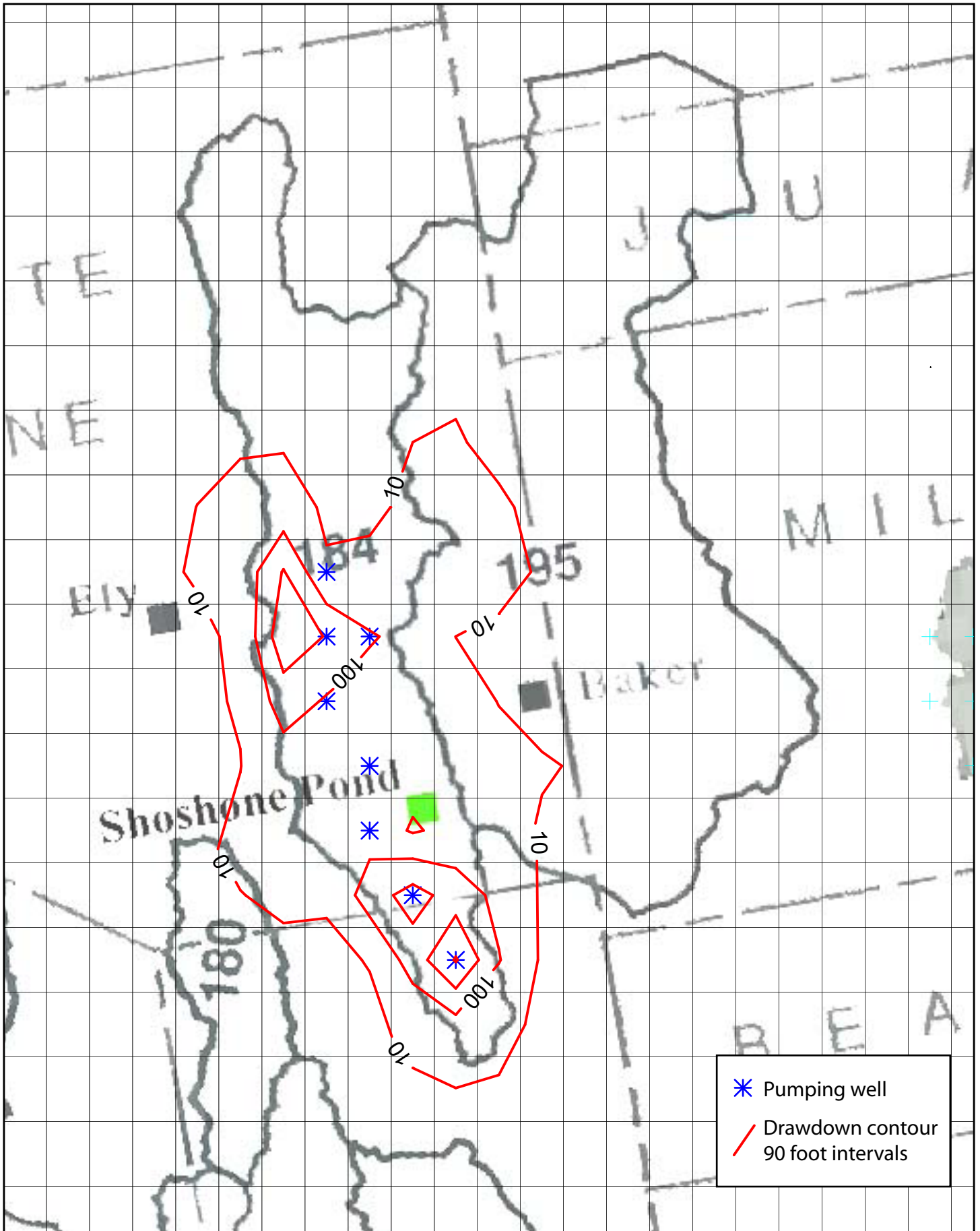


Figure 8A. Drawdown in the alluvial aquifer following 100 years of pumping.

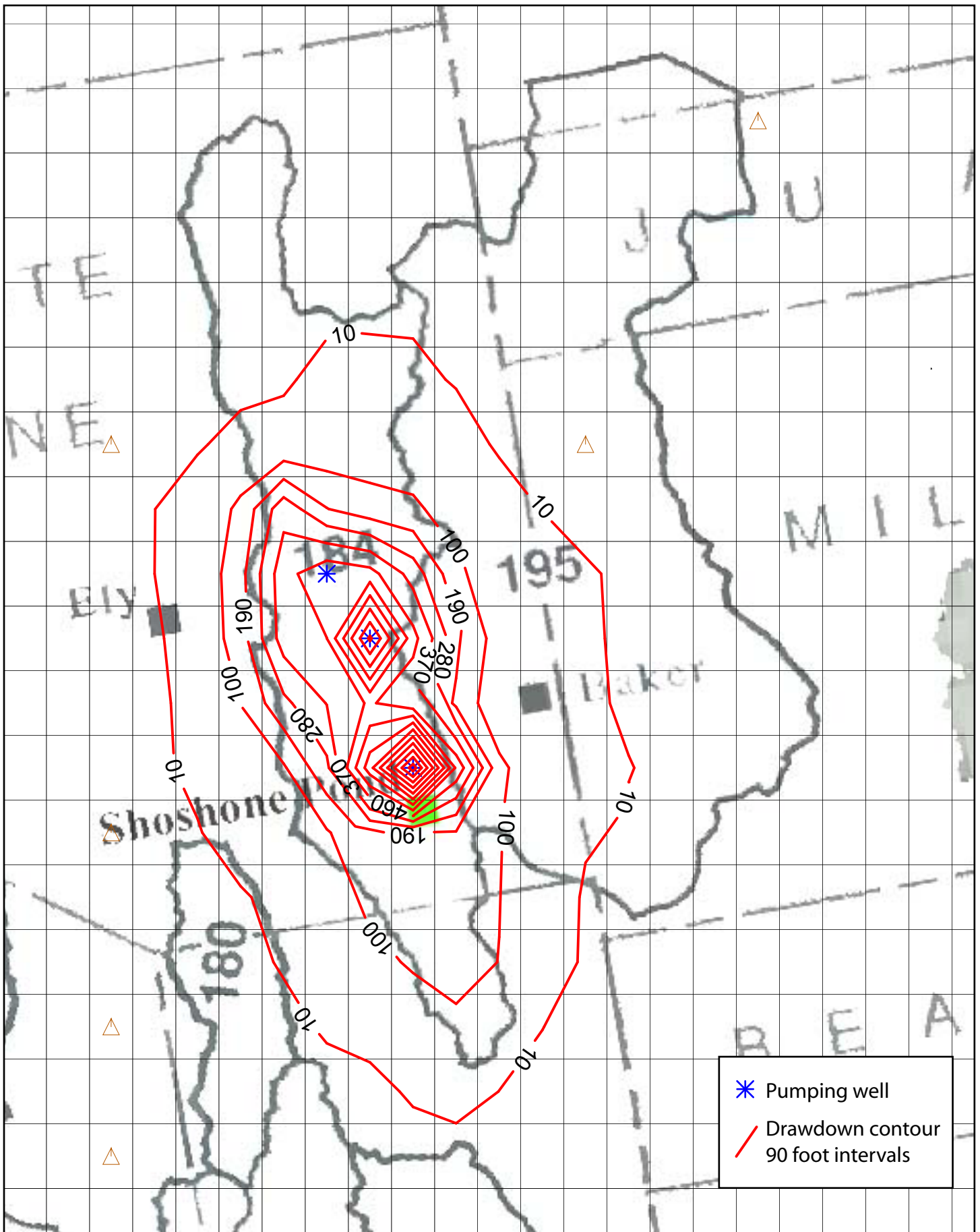


Figure 8B. Drawdown in the regional carbonate aquifer following 100 years of pumping.

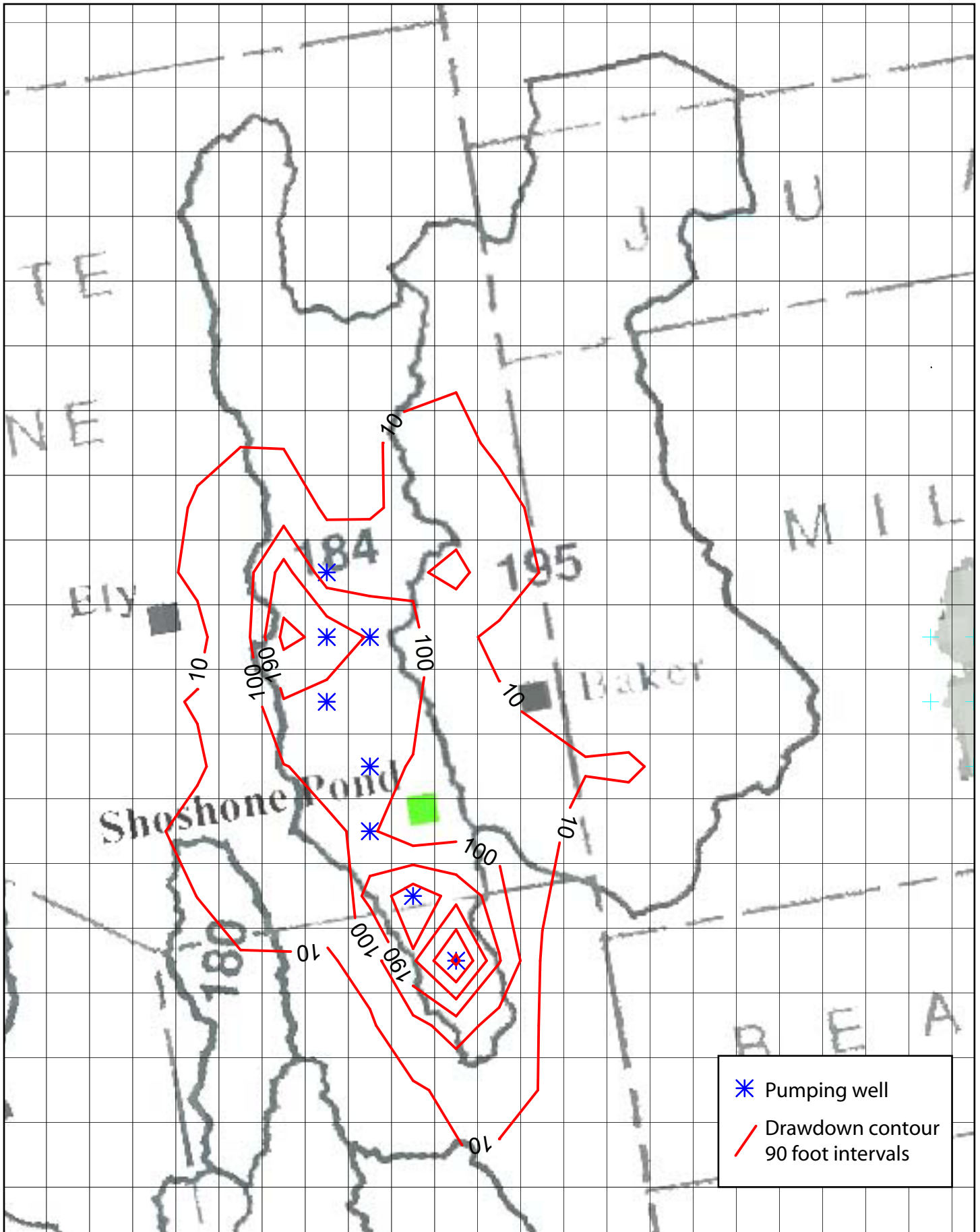


Figure 9A. Drawdown in the alluvial aquifer following 200 years of pumping.

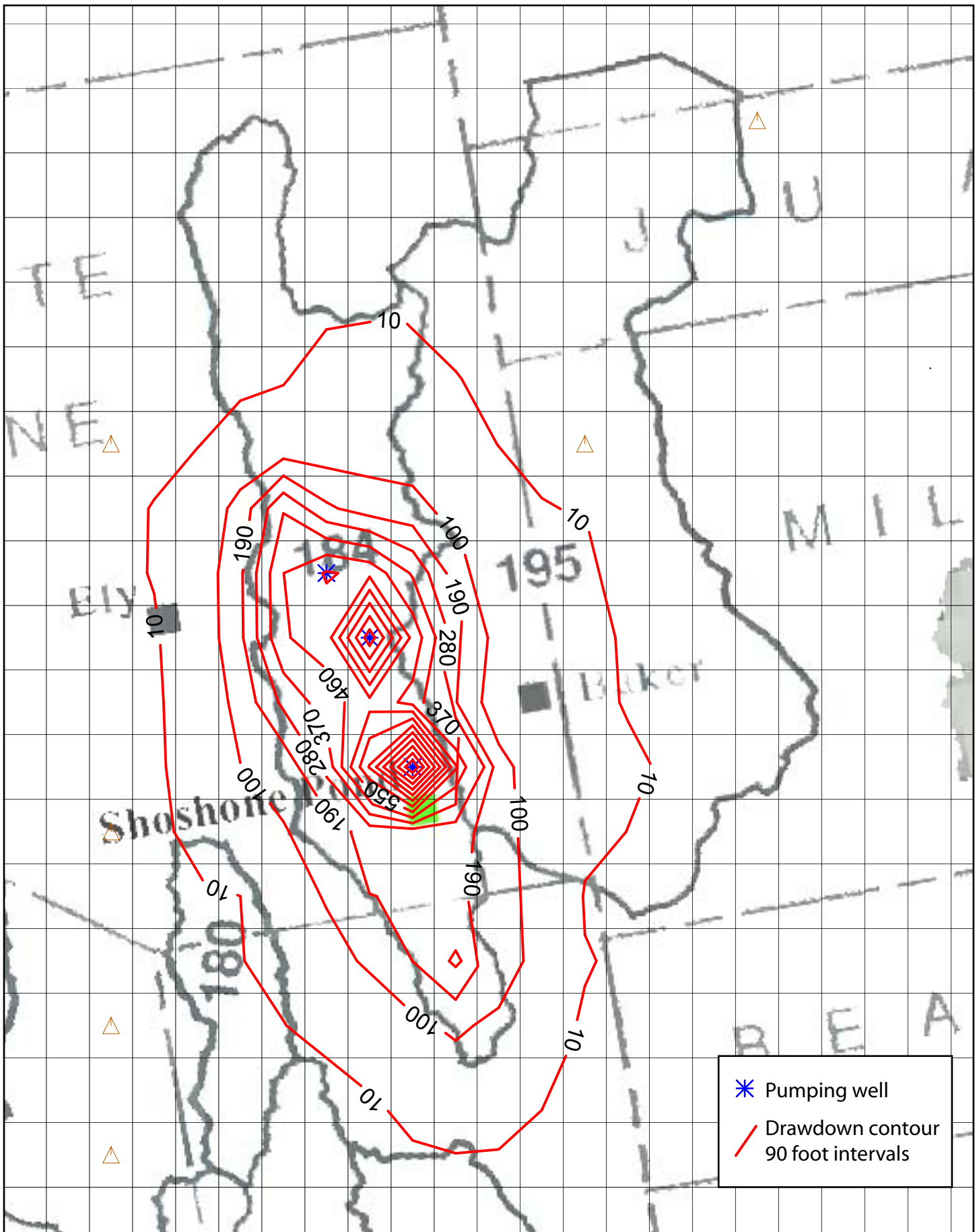


Figure 9B. Drawdown in the regional carbonate aquifer following 200 years of pumping.

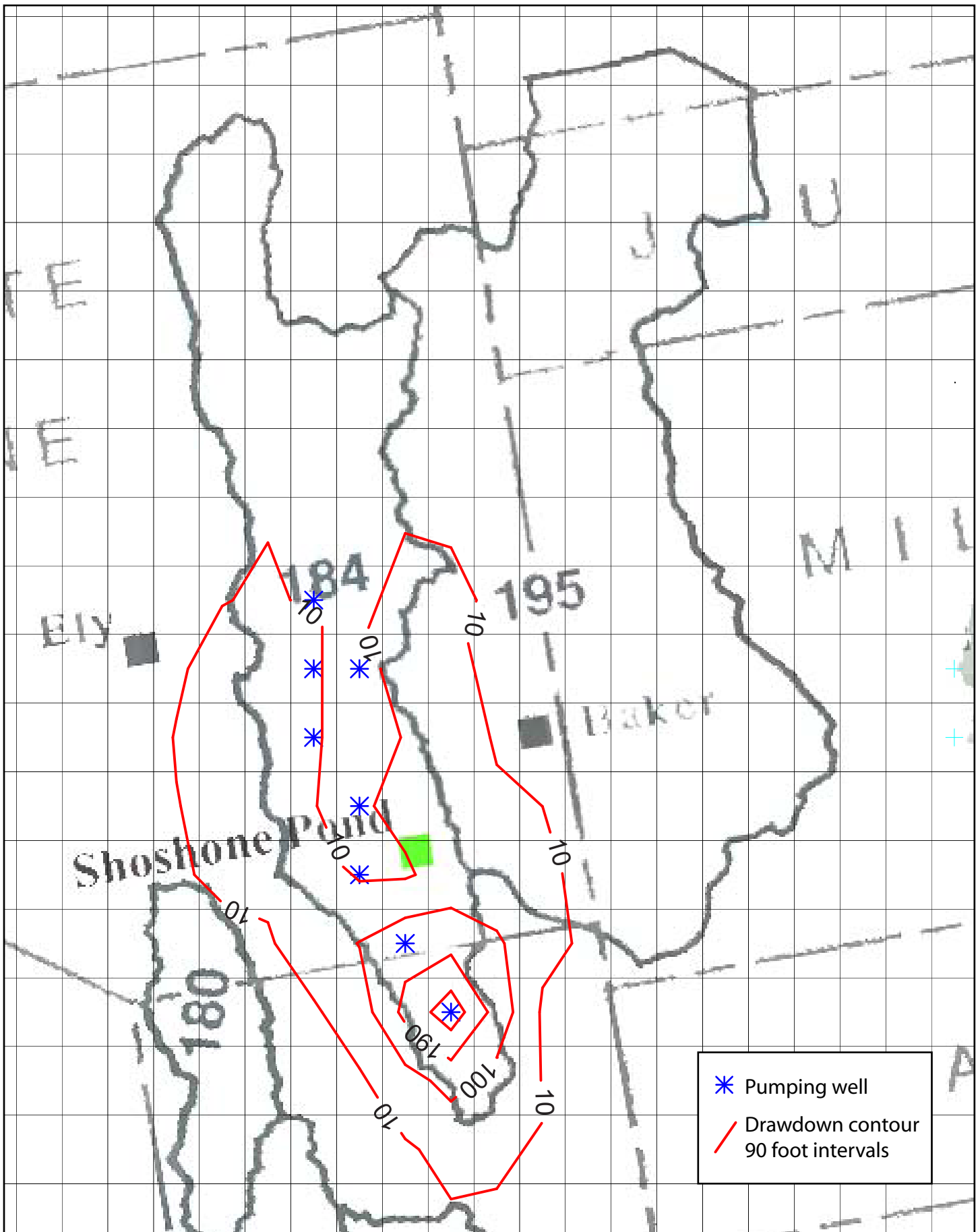


Figure 10A. Drawdown in the alluvial aquifer following 200 years of pumping and 100 years of no pumping. Pumping well locations are only shown for reference.

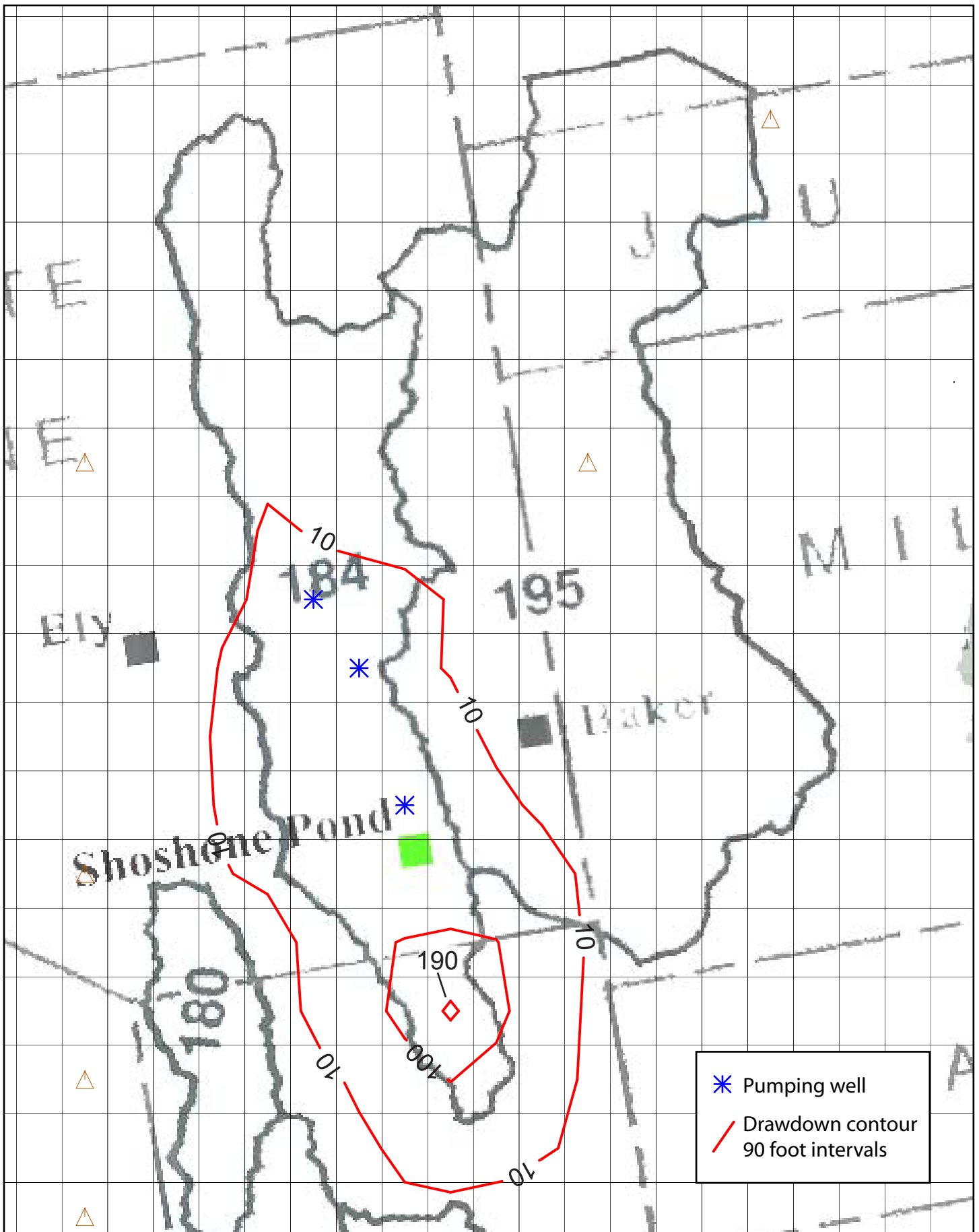


Figure 10B. Drawdown in the deep carbonate aquifer following 200 years of pumping and 100 years of no pumping. Pumping well locations are only shown for reference.





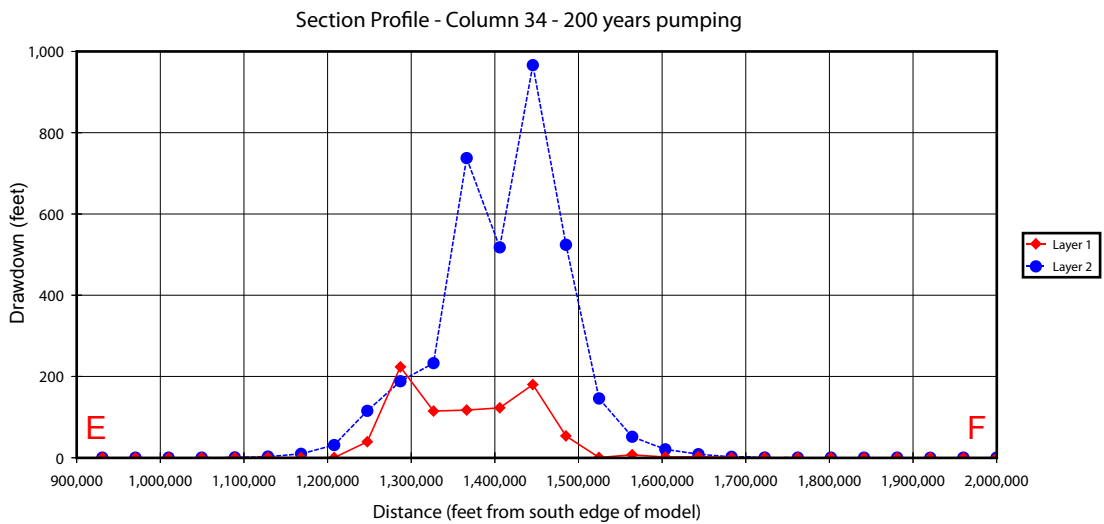
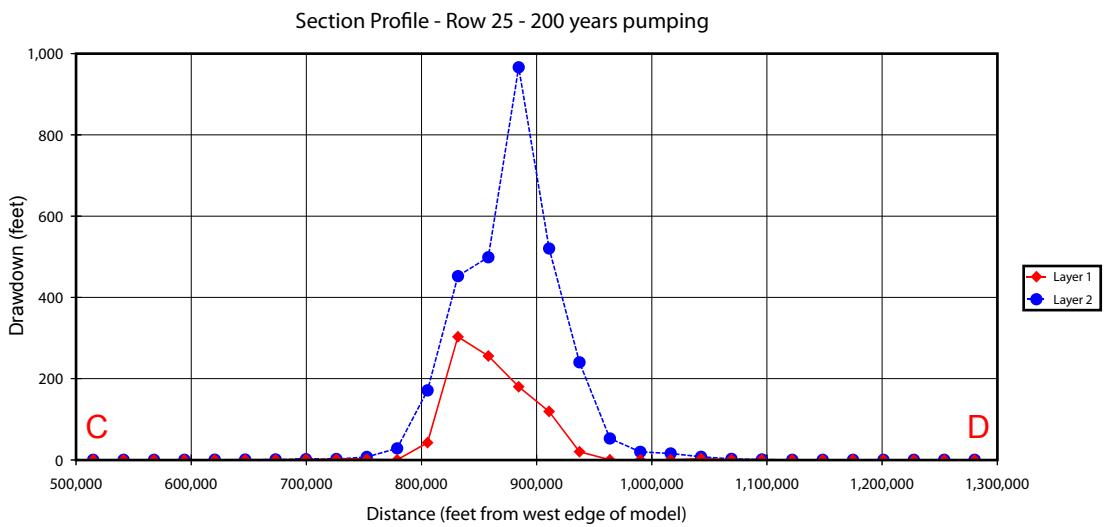
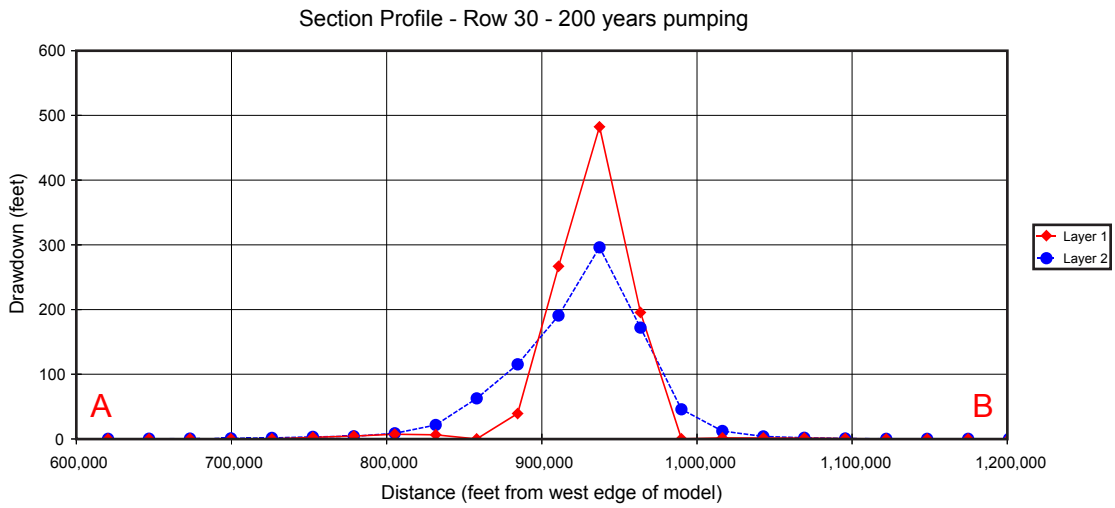


Figure 12. Three cross sections from the transient model simulation. All represent drawdown in layers 1 and 2 following 200 years of pumping at the proposed rates in Spring Valley.

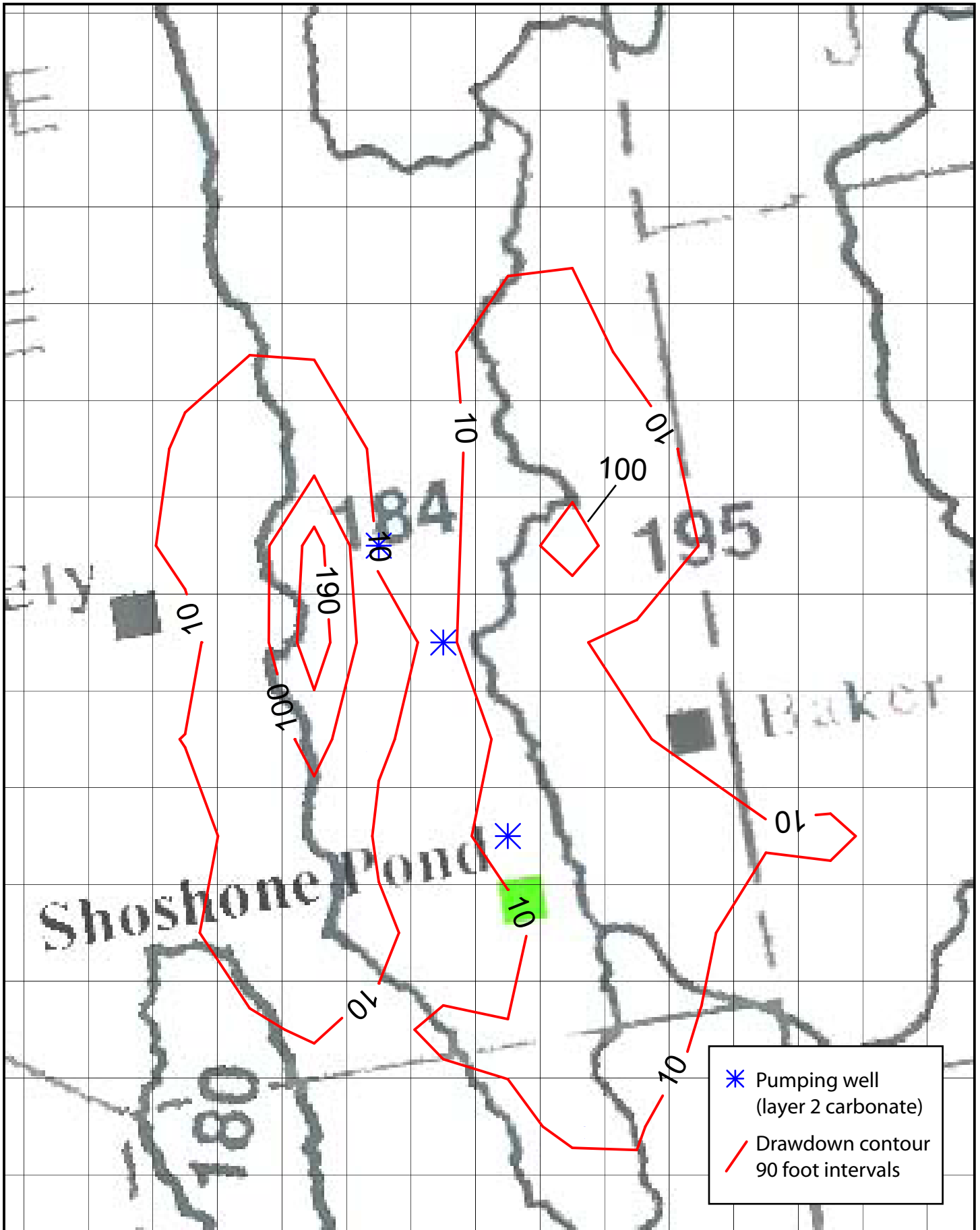


Figure 13. Drawdown in the alluvial aquifer (layer 1) after 200 years resulting from pumping the carbonate aquifer only. The layer 2 pumping rates were unchanged at 10 cfs for each of the three wells.

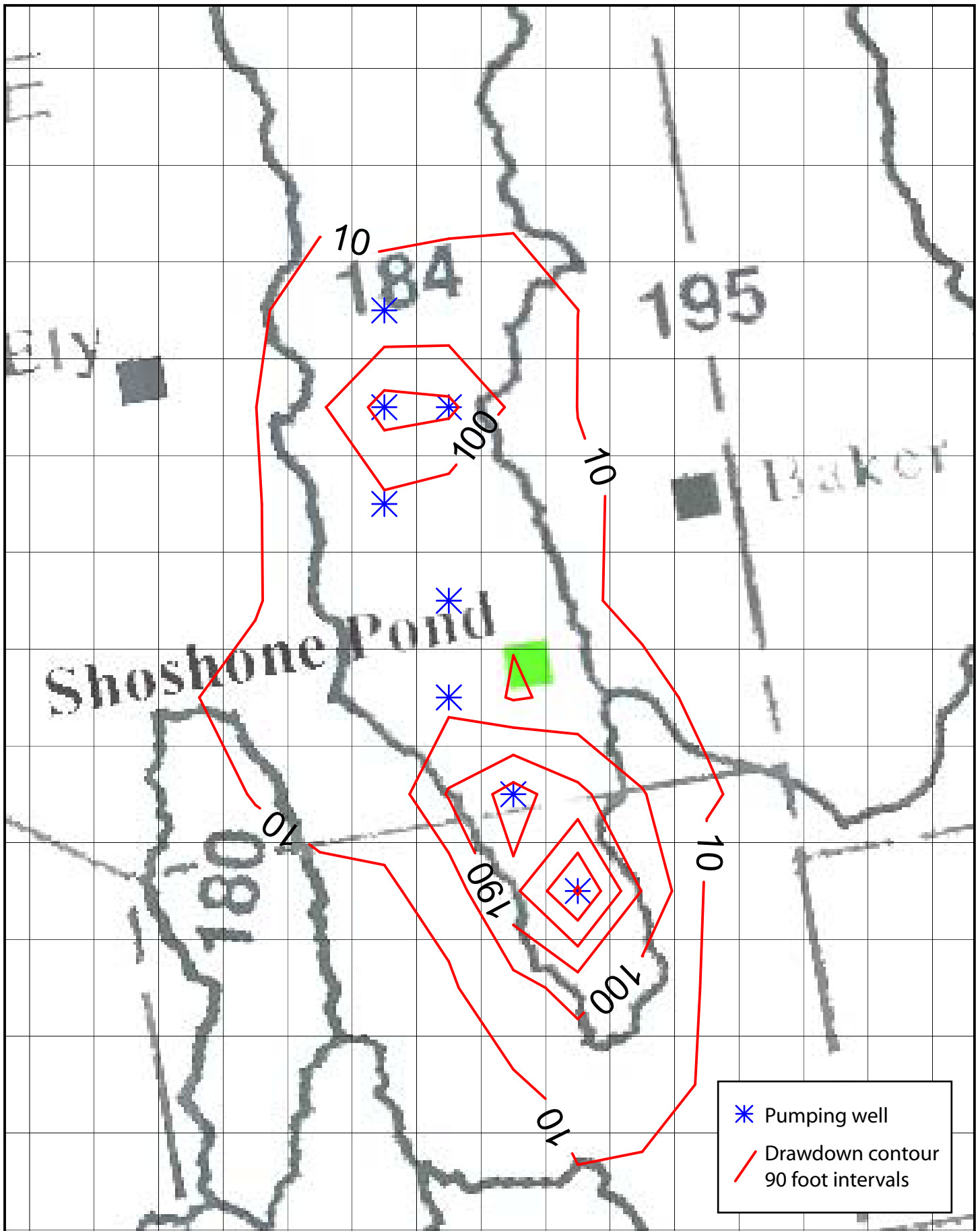


Figure 14. Drawdown in the alluvial aquifer (layer 1) after 200 years resulting from pumping the alluvial aquifer only. The layer 1 pumping rates were unchanged at a total of 96 cfs.